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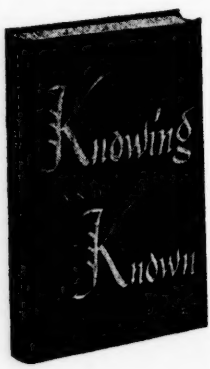

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THE JOURNAL OF PHILOSOPHY

ETHICAL PREDICATES [1]

ON several occasions in the past, I have expressed allegiance to the philosophical school variously called "logical positivism" and "logical empiricism." The paper that follows may seem to you the testament of a deserter, of one who can make no claim to membership in the group. Those of you who are positivists or empiricists may feel that my remarks are a betrayal of a common front. Those of you who oppose the school may welcome the remarks as indicative of a break in the front, but perhaps be none the less hesitant to accept me as a genuine and complete convert.

Were I to evaluate my own present position, it would be to claim that it is essentially unchanged over what it was in previous years: I should count myself a logical positivist or empiricist in so far as I still hold that the methods *described* by members of that school are the only sound methods of philosophical inquiry; but I am sometimes inclined to assert that I am no longer a member of the school;—and this because I can not subscribe to the specific elements of doctrine offered by proponents of the method as the legitimate fruits thereof. In particular, these fruits strike me as defective in several respects: First, they are not always faithful to the empirical ideal of the school. Second, they do not give adequate recognition to the identity of problem, intent, and purpose that bind the present movement continuously to the great historical traditions in metaphysics and ethics. And third, they do not always recognize the extent to which those classical efforts embody findings and elements that even the positivist or empiricist should count as legitimate. In short, I am sometimes tempted to think that in throwing out the bath of an outworn methodology, my positivistic brethren have thrown out more than one baby as well.

The topic of my report is "Ethical Predicates." With respect to ethics, the usual position of the logical empiricist is to find that this branch of philosophy is nonsense, or if the study of ethics is not nonsense, it is hardly more than a study of comparative psy-

[1] A paper read at the Annual Meeting of the Eastern Division of the American Philosophical Association, University of Virginia, Charlottesville, December 28, 1948. The paper was read at a session entitled "Logical Positivism." It is presented here without any change except for adaptation of the first paragraph and the addition of footnotes.

chology. An interesting special turn is given to this latter position by Dr. Charles Stevenson in his book on *Ethics and Language*. The outcome of his study is to allow only the most meager sort of descriptive meaning to ethical judgments, and *that* a meaning of such a sort as to make nearly all ethical reasoning of the kinds usually exemplified, logically irrelevant, so that the connection between ethical reasoning and the eventuating ethical judgments is mainly psychological. This outcome is emphasized by the assertion that to the so-called rational methods of normative ethical discourse, the terms "valid" and "invalid" are generally irrelevant.[2]

It is my contention that the refusal to assign a descriptive meaning to ethical predicates, or the insistence on granting only such a meaning as will not allow normative discourse to be evaluated as valid or invalid, is unfaithful to the very empiricism which the empiricistic school professes as its guide. It is beyond doubt that the daily users of these ethical predicates regard themselves as making cognitively significant judgments, that, furthermore, they understand a difference between specious arguments professing to support ethical predications and sound arguments that do legitimately support them; and that they do *not* regard their ethical predications to be simply and solely reports of their own current emotive states, of feeling and of attitude.[3]

What the common man means when he judges that X is good, is admittedly vague, perhaps also ambiguous. But I hold it to be precisely the function of philosophy to assist that man toward a clearer, more precise, understanding of what he might mean. In other words, just as the reduction sentences of Carnap, or the extensive abstractions of Whitehead, exhibit a connection more or less vaguely recognized by the practicing scientist between his scientific predicates and an empirical base, so the program of ethi-

[2] These comments apply in a strict sense only to Dr. Stevenson's first pattern of analysis. The second pattern of analysis allows more scope to the distinction between valid and invalid ethical discourse; but resting as it does on persuasive definitions, the establishment of which Dr. Stevenson conceives as involving the same types of consideration as do judgments in the first pattern, it also becomes discourse without any ultimate logical grounding.

[3] This contention illustrates the first of my three general criticisms of logical positivism or empiricism. It illustrates a perhaps unintentional or unconscious selectivity respecting the points at which the empiricistic ideal will be rigorously applied. Ordinary human discourse is vague. Philosophical and scientific discourse aims at precision. A precise meaning surely can not be identical with a vague one. But where one's intention is to analyze the vague meaning, the proposed precise meaning must fall within, not outside, the general area that empirical studies show the vague meanings of ordinary discourse to cover.

cal analysis has for its task the elucidation of a connection between ethical predicates and an empirical base. Just as to say that geometrical points are nonsense because an observable is extended, would itself be nonsense; so to say that ethical predication is nonsense because I do not discern its empirical bearings, would be nonsense.

The claims just made do *not* imply that philosophical inquiry is never supposed to alter or revise the understandings that it finds. Its function, like that of all inquiry, is to advance our understanding; and such advancement frequently requires the correction of misapprehensions. But not to find any tenable interpretation for ethical predicates requires of the investigator a simple confession of failure rather than an imputation of nonsense.

Furthermore, noting the admittedly strong emotive meanings of these predicates can not justify the neglect of them by logical empiricists. For the terms they themselves profess to analyze, such as "nonsense," "meaningful," "proof," "valid," "demonstrable," "reducible," "verifiable," "persuasive," "true," and "false," are also terms with strong emotive meanings. What *is* requisite in the case of terms with strong emotive meanings is that the investigator resist the tendency of the emotive meaning to disturb his discernment of the descriptive meaning.

What then is the task? To find descriptive meanings of ethical predicates such as "good" and "evil" that will make sense of normal tendencies to use these predicates; that is, that will be of such a sort as generally to conform to current usages, explain departures from current usage in terms of intelligible errors of judgment or understanding on the part of the current user, and discriminate between valid and invalid ethical reasoning.

The remainder of this paper undertakes to outline one such program of analysis, calling attention at intervals to certain besetting difficulties. The outline is only an outline; in fact, it can hardly be more unless or until substantial progress is made in the empirical sciences.

The view we propose is a form of hedonism or utilitarianism. It takes the view which defines good in terms of the greatest happiness of the greatest number, to be on a promising track.[4] The complications of the earlier part of the account are the result of an effort to show how "the greatest happiness of the greatest number" might be more precisely conceived.

[4] This statement does not imply that we take pleasure or happiness to be intrinsically good. The paper nowhere makes any distinction between extrinsic and intrinsic good. What the statement does mean is that we undertake to define the ethical predicates by reference to the greatest happiness of the greatest number.

Let us call various states of happiness, unhappiness, or apathy, "daemonic states." Human beings, as also other sentient creatures, may then be conceived as loci of daemonic states, each specious present for each creature being the locus of one such state. These states may be classified as positive, negative, or neutral, according as they are states of happiness, unhappiness, or apathy.

Daemonic states should be discriminated from emotions or feelings generally so-called. But this distinction, although perhaps apparent to common-sense introspection, needs refinement and clarification by the psychologist. However, to illustrate the distinction, we may note that a feeling of hunger, accompanied by anticipations of a pleasant meal in pleasant company, can be a strongly positive daemonic state, whereas the same feeling of hunger accompanied with the realization that no food of any sort is anywhere available for a long time to come, can be a strongly negative daemonic state. Or again, sensations of fear, worry, or excitement can under appropriate circumstances be contributory elements in positive daemonic states. The biological, psychological, and social sciences could have much to contribute to the understanding of daemonic states, their causes, their effects, their mutual reinforcements or cancellation of one another.

Bentham's euphoric calculus may be regarded as a theory offering to order daemonic states with respect to their values. Unfortunately, the dimensions that Bentham chose to consider would not all of them seem relevant to this purpose, whereas other relevant items have perhaps been neglected.[5] But that such states *can* be ordered could hardly be gainsaid. There is the direct, introspective evidence of preference, and the indirect, intersubjective evidence of competing drives. The problem is one of finding a theory for the ordering, a theory in terms of which the relative orders may be calculated. To develop such a theory would demand the sensitive and patient collaboration of the psychologist.

But even that is not enough. A question arises as to whether or not the values of these ordered states are amenable to any form of direct or indirect measurement that could assign to them extensive magnitudes. Now the possibility of achieving extensive measures for psychological factors is in general a problem of con-

[5] For example, remoteness (from the contemplated cause or from the moment of judgment?) would seem to have more to do with the probability of the state, and via that with the daemonic value of the potential cause. Also, duration, involving perhaps a plurality of specious presents, could not affect the value of any one state in any specious present except via some enhancement in terms of something like a *Gestalt* factor, the validity of which would require establishment by the psychologist.

siderable magnitude. The measuremental scales now generally in use for such factors tend to give only intensive measures. However, the fact that we feel preferences not only as between one state and another, but as between one combination of states and another, would seem to suggest that the possibility of an extensive measurement is not to be ruled out without further consideration.

A world history includes a distribution of daemonic states among sentient loci. As the values of the separate states may be conceivably measured, so too can the values of their conceivable distributions. But the function for such a measurement is surely not a simple summation of the values assigned to the component states. Among other things, two orders of complexity would have to be considered. In the first place, states attaching to the same locus would presumably interact to affect the value of the sequence. And in the second place, the number of loci, and the extent of their independence one of the other, might affect the values to be assigned to the complex whole. But again suppose—to be sure, a large order—that a formula can be devised to measure extensively the values of given distributions of occurrent states.

Let S, S_1, etc., represent conceivable distributions of daemonic states. And let $v(S)$ represent the value assigned distribution S. Note that $v(S)$ may be positive, or negative, or zero, according as S is preponderantly happy, preponderantly unhappy, or effectively apathetic. Now let p and q be any states of affairs. The occurrence of p will affect the probability of any distribution, S. Thence, we may speak of the probability of S on the assumption that p. Let us represent this by $\text{prob}(S/p)$.

We might propose to define the daemonic value of p, $V(p)$, as the arithmetic mean of the products $\text{prob}(S/p) \times v(S)$.[6] But since the class of these products is presumably infinite, we run into a difficulty similar to that encountered in undertaking to define probability as the ratio between two infinite classes. A solution to the latter problem will suggest a means for solving the former.

With the daemonic value of p defined, we can approach the definition of familiar evaluative predicates, as follows:

p is called *better than* q if the value of p is greater than the value of q.

[6] An interesting special application of this formula occurs when p is some daemonic distribution, S_1. The products in question are then all of the form $\text{prob}(S/S_1) \times v(S)$. When $S \neq S_1$, the first factor, $\text{prob}(S/S_1)$, and hence the product, has value 0. When $S = S_1$, the first factor $= 1$, and the product has the value $v(S_1)$. Hence, the daemonic values, $V(S)$, of the daemonic distributions will vary directly with their original values, $v(S)$.

p is called *as good* as q if q is not better than p.

p is called *good* if p is scientifically possible and as good as any scientifically possible alternative to p.

p is called *evil* if p is not good.

The predicates just defined may be regarded as not ethical predicates. For the predication of good or evil to be ethical judgments, it is requisite that the judged p be the act of a person occurring consequently upon his choosing it.

The point to be noted at this juncture is that, assuming extensive measurements can be assigned to distributions S, S_1, etc., the proposed definitions make moral predications of good and evil empirically meaningful. Not in the sense that the truth or falsity of a given predication can be categorically determined; but rather in the sense that empirical considerations can affect the probability of such propositions as that p is better than q, where p and q are scientifically possible alternates. For the empirical sciences enable us to infer something about the relative effects of p and of q on daemonic states occurring in the neighborhood of p and q, perhaps less about the daemonic states occurring more remotely. But these inferences concerning individual daemonic states have a bearing on the probabilities of various daemonic distributions, hence on the relative values of p and of q.

Yet despite this bare meaningfulness of moral predications of good and evil, one would surely be extremely hesitant about affirming with much confidence that any given p is good or is evil. The development of the relevant scientific theory, biological, psychological, and sociological, is still far too inadequate. And yet even if the theory were available, most men would not possess the scientific knowledge and skill requisite to making any reliable applications of the theory. It is this impasse that gives importance to the predicates "right" and "wrong."

It is said to be *right* for x to choose act y if, to the best of x's knowledge, his performance of y is good. It is said to be *wrong* for x to choose act y if, to the best of x's knowledge, his performance of y is evil. It is to be noted that when x decides in the light of his best knowledge, this knowledge may well be a resultant of his personal consideration of the problem on its merits, and of the inclining influence of trusted authorities, the mores, and the laws.

It follows from the given definitions of good, evil, right, and wrong that a given action may be right but not good, good but wrong, as also, of course, good and right, evil and wrong.[7] Fur-

[7] These consistencies are important. E.g., A. J. Ayer rejects utilitarianism because, he holds, it can not establish them (*Language, Truth, and Logik*, New York, 1936, pp. 153 f.).

thermore, a second person may consistently judge the action of x to be probably evil but nevertheless right, or probably good but nevertheless wrong.

As I review the remarks of the preceding pages and consider the mass of scientific theory that must be systematically developed even before the defined ethical predicates can be established as significant, let alone be confidently employed, I am led to wonder at the vigor and assurance with which people incline to debate ethical problems. It is perhaps the very backwardness of the relevant empirical sciences, coupled with the urgency of the ethical issues, that to a large extent explains the *a prioristic* traditions in ethical theory.

But at the same time, these *a prioristic* traditions offer some faltering organization to the knowledge relevant to the making of ethical judgments. The content of those traditions is undoubtedly more thoroughly rooted in the unorganized experience of the race than is often recognized. And I am myself inclined to believe that the gradual elaboration of carefully controlled scientific theory will tend to confirm, with corrections and restrictions, more of this *a prioristic* tradition than it is customary to admit.

For example, the Stoic tradition and much of religious teaching offer a well or poorly formulated sanction for empirically confirmable doctrines to the effect that daemonic states are not determined solely by external circumstances, but to a considerable extent by the manner in which the potential sentient locus meets those circumstances. The younger branches of psychology and medicine, namely, psychiatry and psycho-somatic medicine, are giving increased confirmation to that thesis. On the other hand, Epicureanism testifies to the relevance of individual daemonic states as factors contributing to the daemonic distribution, and to the importance of attending to these individual components. Thirdly, much religious teaching is given to repetitively reminding its adherents that the daemonic distribution depends as much on the daemonic states of one's fellow men as on those of oneself. Finally, moral codes more or less accurately and more or less adequately point to *types* of action that affect the daemonic distribution in approximately constant ways. These considerations prompt a closing admonition; *not* to discard those traditional springs to the moral judgment any more rapidly than they are *dis*confirmed by the slowly developing patterns of empirical science.

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CAN NATURALISM BE MATERIALISTIC?

I SHALL not contribute to the current dispute over naturalism's present affinities to materialism. It is my own opinion that some naturalists succeed better than others in avoiding materialistic premises and modes of thought, but I am not at all sure that any of them can fully clear themselves of all tincture of materialism. I am not sure that I can do this myself, much as I should like to. Materialistic attitudes are ingrained in most of us, especially those who, like the naturalists, are much concerned with science and science's conclusions. Instead of arguing the *fact* of naturalism's relations to materialism, I shall attempt to show, by means of a formal analysis, that the naturalists must incorporate in their conception of nature certain fundamental conditions that are not compatible with any form of materialism. It is hoped that a full consciousness of these conditions and the paradoxes that follow from their negation will help to guide the naturalist in his attempt to formulate a logically consistent concept of nature and man's place in nature.

My argument hinges on the fact that all naturalists to date have agreed in accepting scientific method as the only appropriate means for a study of nature. It is therefore directed not only to the naturalists, but to all who grant to scientific method a rôle of like importance. I shall not concern myself with a full delineation of scientific method, but shall simply call attention to three features it admittedly displays:

(1) Scientific method includes a logical phase of hypothesis formation and criticism and hence, in addition to appealing to the "facts," admits that logical consistency is a criterion, if not of fact itself, then of the fitting of hypotheses to facts.

(2) Scientific method stresses the necessity of employing operational definitions of the "facts" to be experimentally ascertained. The facts to which I shall call attention are for the most part pretty far removed from the level of immediate observation, but it is assumed that *if* they are facts, then there does exist an operational route of derivation for each of them. It is really with the possibility of such a route that I am concerned.

(3) The conclusions at which scientific method arrives—indeed, the data from which it starts—are tentative only. Any propositions that are not tentative are actually tautologies.

I now intend to examine the abstract conditions under which any method displaying these three characteristics could be applied, and, finally, to ask whether any variety of materialism is able to

provide such conditions. Materialism, it must be remembered, is a metaphysical theory. It tells us what reality is like, and hence lays down the conditions under which any real process can occur. A materialism that issues as a product of scientific investigation is, of course, tentative; but even as tentative it is definitive of conditions limiting those processes that could be regarded as real *if* it were true. I do suspect that materialism is usually entertained as a metaphysical postulate rather than as a conclusion of empirical investigation, but my argument does not turn on its status as a postulate.

The prestige accorded to logical consistency by scientific method permits us to apply consistency as an over-all critical test. Our first question then is: What are the conditions under which data could be collected and organized by an observer? Whatever the conclusions of a scientific investigation may be, they must be consistent with these conditions, since any doubt that is cast upon the data of a science is automatically carried over to its conclusions. Obviously, the nature of the observer must be considered in seeking an answer to this question; and it is equally obvious that the nature of the data must be taken into account. It is therefore impossible to lay down a set of conditions in the abstract. We can only assert that, however the observer be conceived, and whatever kind of data be desiderated, data and observer must be such that they can stand in the same kind of relations to one another as are employed to construct the hypotheses of the science. This amounts to the assertion that the observer must be a part of the system he is observing—an assertion that is in consonance with the naturalist's conviction that man is an integral part of nature, and also with the general conditions laid down by an operational theory of scientific method. But without completely abandoning analysis on a very high level of abstraction, we can deduce from the condition that scientific method is tentative, considerations that will permit us to draw somewhat more specific conclusions. A tentative method must be carried out in time. If all the required data were presented at once, only the process of hypothesis formation could be tentative. But to drop one hypothesis to consider another is an act that could only take place in time. One doesn't need to convince the empiricist, of course, that data too come strung along in time. In fact, when he says that his conclusions are tentative, he frequently means that they are so because all the data relevant to them haven't yet occurred. Now if the data of a science are strung along in time, the observer of those data must not only be in time too, but he must be of a nature capable of summing up strings of data and organizing them into hypotheses. This condition demands much more than

that the observer be a part of the system he is observing. His relations to the system must be such that he can muster data derived from different temporal positions in the system. It can be urged, of course, that only in a present can an observation be made, and that the observer merely "stores" these observations within himself, drawing them forth on appropriate occasions when he engages in hypothesis formation. But it is not only the qualitative content of data that is required for hypothesis formation; temporal relations also are requisite. This means that observations must be stored in such fashion that recall will be of their temporal relations as well as of their content. If, because of the manner in which temporal relations are conceived, it seems impossible to "store" them as such, they can perhaps be retained in the form of serial relations in any other medium that is available. If, then, space be introduced in the system, and the observer be given an internal spatial structure, the temporal sequence in which observations were made can be represented by spatial relations of the "positions" in which they are stored. Unfortunately, this assumption is not, of itself, sufficient to solve the problem. The observer must still be able to interpret spatial series as clues to temporal series. To do this he must at the least become aware of their similarity, and to become aware of their similarity he must in some field of consciousness have both before him. This means that some field of consciousness must have a temporal "spread." Also it must have a spatial spread, since it is equally necessary that spatial relations be presented in consciousness. In concluding this phase of our analysis we can then assert that though a certain kind of isomorphism of spatial and temporal relations makes it possible for the former to partially replace the latter in reasoning processes, this isomorphism must be initially established by observation; hence the observer must be of a nature capable of observing both.

Let us next note another condition implicit in the assumption that scientific method is tentative. Though naturalists would not admit that observed facts are "hard" in the sense that they do not undergo transformation as they are incorporated into one or another hypothetical structure, they do distinguish sufficiently between facts and the hypotheses that are built on them, to admit that the same facts can enter as constituents in a plurality of hypotheses. An hypothesis is an ordering of facts within a medium. An hypothesis can be tentative—or, what is the same thing, a plurality of hypotheses that order differently the same set of facts can be entertained—only if facts can assume a variety of positions within a medium. This medium, furthermore, can not be identical with the medium in which observation takes place, because the assignment

of a fact to a position in that medium is automatic and irrevocable. The fact that such and such an observation has been made fixes that observation to a position in the observation-medium. The content of the observation may be "free" of the position in which the observation is fixed if it be an abstract characteristic—but this is just another way of saying that abstract characteristics exist in a medium other than that of observation. Now I have no doubt that most scientific observations are of phenomena of abstract content. Usually the fact that an observation is made at a certain time and place is of small importance. The point is that it is only by conceptual manipulation of "facts" that hypotheses can be formed, and whether or not an objective fact as a particular is fixed in an ontological spatio-temporal medium, it, or a symbol or concept that represents it, must be capable of assuming a plurality of positions in a conceptual medium.

Furthermore, the position of a fact in a conceptual medium is in some fashion subject to the control of him who constructs hypotheses. If the re-ordering of a set of facts to form a new hypothesis were an event like the rearrangement of a set of physical bodies in space and subject to the same physical laws that are supposed to hold of the latter, all hypotheses would be physical arrangements, physically produced. In a sense, any symbolically expressed hypothesis is a physical arrangement of physical entities, for symbols, be they spoken words or written marks, are physical, and the order in which they are arranged is spatial or temporal. Yet it is not the physical order, as physically produced, that lends significance to symbols. If it were, they would have to be studied just as are the observed events of nature; and to form hypotheses about them we would have to assume yet another conceptual medium within which hypothesis formation could take place, which in turn, if symbolic, would be reduced in the same manner to a set of physical entities to be studied in the same way. . . . The control of the thinker over his symbols is, to be sure, limited by rules that he himself imposes on his symbol-manipulations, but these are of logical rather than causal force. They do not prevent the manipulator from arranging his symbolic marks in any way his fancy dictates. They merely restrain him on condition that he wishes to preserve the symbolic function of these arbitrary marks.

We are now ready to turn to the second phase of our investigation. To what degree can any theory that could reasonably be called a materialism fulfil the conditions revealed in the above analysis? First, can we find any abstract characteristic common to all materialisms that might be inconsistent with the above condi-

tions? If there is any postulate that distinguishes materialisms from other metaphysical theories, it is the belief that whatever is real is either itself continuous in space and time or is an attribute of something that is continuous. What it is that persists is variously interpreted—impenetrable, immutable particles, electricity, energy, etc. But whatever it is, it is something that can be identified and described in terms of spatio-temporal coördinates that, though subject to change, change only in accordance with certain mathematically expressible laws. Since these persistent entities, however they be interpreted metaphysically, are all conceived as existing in a common spatio-temporal medium, the series of coördinates descriptive of the history of any one must be adjusted to those series descriptive of the history of each of the others. In other words, unless there be assumed a pre-established harmony that would eliminate the possibility that one entity might at some instant pre-empt a position belonging to another, laws descriptive of the change in coördinates of one entity must be general enough to apply to other entities and must apply in such fashion that competition for occupancy of the same positions can be resolved. This condition, that the laws of motion of a system of material entities must also be laws of interaction conservative of the identity of the entities of the system, is met by giving to each material entity a unique and definite spatial position for every instant.

As we have indicated in the first part of our analysis, there is a formal need for an observer-thinker implicit in the empiricist's concept of scientific method, and this observer-thinker must derive his empirical data through natural relations in which he stands to his environment. So far as he can be regarded as a material entity, the relations are of the sort that dominate the materialist's picture of the world, and the observer is drawn into this network of relations as merely another material entity or system of material entities. But merely as a material entity he is not an observer. Such influences as impinge on him must be interpreted as having their origins elsewhere. He must, even to conceive himself as a material entity, plot his own spatio-temporal path by reference to the paths of other material entities, and so he as observer can not be confined to the set of positions which, as material entity, he occupies. To be sure, once he has produced a specific hypothetical picture of the world, including himself, he can justify, on mechanistic grounds, the fact that he has information about other entities. That is, he can show how chains of physical causation that have their origin in such entities reach him; yet in contemplating such a mechanical scheme he is considering not just the influences that do reach him,

but their origins and their adventures through the medium of transmission.

It should now be evident that some very strange shifts of point of view have taken place. The acceptance of a materialistic metaphysics forces on us the assumption that the observer-thinker, as a material entity, is confined to a given place at a given time and does not of itself provide us with a consistent account of how he could know of anything existent at any other place or time. But the acceptance of a method of knowing that is hypothetical and tentative forces us to accept simultaneously the *fait accompli* of an awareness that transcends space and time at least to a degree that will permit it to gather in the basic relations out of which materialistic hypotheses are constructed. And then confusion is heaped on contradiction when it is finally asserted that materialism is itself an hypothesis. For what is an hypothesis? Has it any place or function in a materialistic world? Can one *really believe* that the world is materialistic and still believe that any entities, events, or processes in *it* are hypothetical? Hypotheses are formulated in a conceptual medium wherein "what is not" can be represented quite as well as "what is." If this were not so, how could we entertain any doubt of the truth of an hypothesis? But can there be more than one medium for a materialism? And can there exist in this medium anything other than "what is"? Consider a geologist, regarded simultaneously as a material entity and a being capable of entertaining and acting on an hypothesis, who sets out to dig for a vein of gold that he calculates should lie beneath a certain spot. Suppose the gold isn't there. He is motivated then by something that, materialistically, doesn't exist. But what kind of materialism will admit of such motivation? Now of course the materialist will deny causal efficacy to the hypothetical gold and will transfer it to a present desire for gold on the part of the geologist—a desire that he may interpret as some kind of "set" of the man's physical brain. And he will account for the choice of this spot for the digging operations in terms of past conditioning of the geologist's brain and present observation of certain signs—presence of certain rock strata, etc.—that, fed into this brain, issue in certain decisions. But this explanation does not meet the point at issue. The materialist's explanations are themselves hypotheses and the materialist's convictions rest on the assumption of certain material states and events in the brain of the geologist that are certainly as likely not to be there as is the gold the geologist seeks! Grant that the materialist is right and you grant that his belief is fact, not hypothesis. That is all that is needed, of course, to prove that what doesn't materially exist can not be causally efficacious; but that the

materialist is certainly right is precisely what can not be granted by one who asserts that all reliable methods of acquiring knowledge are tentative.

This postulate that scientific methods lead only to tentative conclusions is far more radical than most philosophers have thought. If the self-conscious employment of hypothetical methods has worked a revolution in the sciences, it should bring about even more profound revolutions in philosophy. If the naturalist wishes to retain his professed respect for logical consistency, then he must readjust his concept of "what nature is" to bring it into accord with the methods he would employ to study nature. The fragmentary study that has been undertaken in this paper can lead only to incomplete and highly abstract conclusions respecting the characteristics of nature. For this has been a logical study and a logical study can lead only to judgments of consistency and inconsistency. Thus we can in conclusion state only that nature must possess certain generic characteristics and can not possess certain others if the naturalist's assumptions as to method are to be compatible with the possibility of the success of that method applied to nature:

(1) There must be found a significant place in nature for a thinking being and a natural medium in which thought can take place.

(2) Any attempt to construct a physicalistic medium in which thought and awareness could occur puts the cart before the horse. The physicalistic medium will turn out to be an hypothesis formulated within a thought medium. If the thought medium weren't there already, such an attempt could not even be suggested, let alone completed. If the process of knowing is, or contains, a process of hypothesis formation, then a physicalistic theory is an hypothesis and already exists in the kind of medium within which hypothesis formation is possible. My point here is really very simple. Anyone who makes method primary must bestow his attention first on conditions that would validate his conception of method and his criteria of a successful application of method. Any set of conclusions that issue from the application of an accepted method can be used to confirm, but not to refute these conditions, because if the latter don't hold, then these conclusions don't hold either. Of course, if contradictory conclusions follow with complete logical rigor from the conditions, then the conditions themselves are contradictory. This would leave the conclusions without force and would turn us back to a consideration of the conditions. But the one thing that we could not afford to admit, unless we were to abandon the postulate that what exists is logically consistent, is that a set of conditions that does make thought possible does not

exist, for it is by a process of thought that the present argument is being carried out.

(3) It would seem that the naturalist might learn much more about the kind of world-view he is ultimately to adopt through a study of the sciences as structures of hypotheses than through a study of their conclusions as indicative of the nature of reality. Above all, he should study abstract mathematics as a discipline perhaps definitive of the possible range of logically consistent thought activity. Some naturalists—I might name Dewey, Nagel, and Edel —are already launched on such a study. But I am not recommending an abandonment of metaphysical speculation in favor of a study of language and sign behavior. Whatever is learned by a study of language and mathematics must be carried over into a set of tentative metaphysical premises consistent with the conditions, revealed by this study, under which symbolic activity is carried on. If the arguments I have presented are cogent, then whatever these metaphysical premises may be, they can not be those that underly materialisms, for the latter are not consistent with the conditions of observation and hypothesis formation.

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BOOK REVIEW

A Treatise on Language. ALEXANDER BRYAN JOHNSON. Edited, with a Critical Essay, by David Rynin. Berkeley: University of California Press. 1947. ix + 443 pp. $5.00.

While Comte in France and J. S. Mill in England were developing what might be called psychological and sociological positivism, in the United States (Utica, N. Y.) a man whose business was banking and insurance was propounding the "logical" variety, based on linguistic considerations. Thus he much more closely approximated the neo-positivism of today, which has become the ubiquitous gadfly to the metaphysical state-of-mind. Alexander Bryan Johnson annoyed only the handful of local theologians who noticed his writing. The big theologians and all the philosophers ignored him. Even thirty-five years after the publication in 1836 of Johnson's *Treatise on Language,* James McCosh, then president of the "College of New Jersey" at Princeton, did not mention him in his lectures on "Christianity and Positivism," delivered at Union Theological Seminary on the Ely Foundation. The representatives of positivism were, for McCosh, Comte, Mill, and Spencer.

Though the editor of this useful book does not mention, in his preface, introduction, and critical essay, details of wider historical significance such as the above, and though the standards of his own critical evaluation of Johnson's theory of meaning are taken exclusively from Wittgenstein and Schlick (Carnap and Morris, e.g., are not mentioned), yet the ensemble is more valuable as an introduction to the general theory of signification than most of the too precious current treatments. While linking the subject with historical antecedents and thus giving the student an occasion to explore the context further, its partial reference to present developments stimulates inquiry in their direction. Thus it functions nicely as the hub (if not the spokes) of the wheel of a general investigation into what Cunningham has called the meaning situation.

This review is to concern itself mainly with points in the editor's critical suggestions, but first let us get an impression of Johnson's position, which after all is the book's *raison d'être*.

Perhaps the main failing in this century-old American theory of sense and nonsense is its incipient negativism. It has affiliations with Locke's subjectivism (the objects of knowledge are "ideas"—sensations) and with the stultifying scepticism about the "external world" that naturally attends subjectivism. Comte's "positivism" also was tainted with this fear of wide questions about the universe, as if wisdom consists in putting your head only in the sand of proximate and practical human concerns. Such "positivism" I call negativism. Listen to Johnson. "To know the extent of our powers will save us from impracticable pursuits. Man exists in a world of his own creation. . . . He is boundless in attempt. . . . Uncontented with subjugating the ocean, he would traverse the air. . . . To know the extent of our powers is therefore important that . . . we may [not] dissipate strength in designs for which our faculties are unsuited." Anyone who cautions a man not to fly because swimming and sailing are enough is a negativist, and Johnson tends, with venerable precedent, to be one of them, in the field of thought and imagination.

But it is not this tenor that makes him conspicuous. He is a small negativist, after the giants in the tradition of the negativism that at first infected modern empiricism (Galileo, Locke, Hume, even Berkeley). His thought is noteworthy for the more genuine positivism that marks the later attack by neo-idealists, pragmatists, and neo-positivists on the pseudo-difficulties attending the old dualistic and subjectivistic epistemology. The perceptive reader of Johnson senses his sustained attempt, not to warn people against unknowables, but to incline them to notice more carefully what

moves them to make their assertions and to capture the real (perhaps implicit) meaning of the terms used in them, thus providing for inter-communication—and confirmability where truth-values are aimed at. For example, he says about the old question of access to the "external world," that it depends on the meaning of the word "external"; it "relates to language, and not to nature." (He should have said, to nature *and* to language; there is no exclusive disjunction. Like some present-day positivists he is given to such sweeping statements that over-step his intention—as when he goes on to claim that, after considering the question from the side of language, "*all* mystery vanishes." [P. 65, my italics.]).

Johnson is also aware of the bothersome general fact that "words can be divested of signification, and still be formed into propositions [expressions?] which will not be obviously unmeaning" (p. 96). That this can happen to *ordinary* words, such as "external," "in," "substance," "perceiving," etc., is the real pitfall. He even intimates an operational criterion to isolate out and secure the factual sense of terms. Thus he cautions against what we would call an "intuitive" extension of the meaning of terms beyond their ordinary use (in the area of scientifically unsophisticated facts) to the very large or the very small (p. 37, *et passim*). This is Bridgman's message. (Like it, Johnson's formulation carries the unfortunate implication of traditional subjectivism, not, as in Bridgman's case, because the defining operations are human, but owing to the awkward notion that things, in the last analysis, are sets of sensations; "water is a sight, a feel, and a taste" [p. 101]. Even the editor tends, with Johnson, to make nonsense of what can not be sensed, but we shall develop this later.)

Moreover, Johnson hints at an evocative function of language which must be taken into account if the full force or total meaning of an expression is to have justice done it (p. 31, Lecture XI). But it is nothing more than a hint, and the omission is a major flaw in this theory of meaning.

The constructive side of his whole effort, embodied in this book, is perhaps best exhibited in one fine sentence. Notice, in the following citation, the diligent concern not to deny the existence of gold (values) in the field of experience and thought, but to point to a weakness in the method of mining it. He says that, unfortunately, metaphysics is being abandoned more "like a [rich] mine which will not repay the expense of working, rather than like a process of mining which we have discovered to be constitutionally incapable of producing gold" (p. 300). In short, he regrets the unnecessary scepticism about the existence of gold, while

all the time the difficulty lies simply in a faulty technique of getting at it. Had he a more adequate *general* theory of language, treating its theoretic and evocative functions and the natural blend of these on most occasions, he would have had more to say in favor even of the method of metaphysical utterance and its power to produce gold. This is the impression that a between-the-lines reading of the book gives. And it is the philosopher's special function to read or listen to a man in this helpful way, eventually making explicit the implicit meaning of the utterance, in the light of what is found and cherished in the field of experience.

We are now ready to turn to the contribution of the editor, which is no small part of the book—one hundred and twenty-five pages of an appended "Critical Essay on Johnson's Philosophy of Language." It is big also in the sense of being a valuable critical summary of Johnson's theory, in the light of standards bequeathed by Wittgenstein and Schlick. The first fifty pages are given to straight exposition of the editor's own theory, the remaining seventy-five to an illuminating application of this to Johnson's position.

Mr. Rynin argues, e.g., that inductive generalizations are to be interpreted, not as propositions, but as imperatives for expectation. He overlooks Carnap's extension of cognitive sense to include such generalizations as propositions without forsaking the main position of positivism. Also, he tends like some other positivists towards what I shall call a reductionist theory of cognitive meaning, according to which any factually significant expression is, in the final analysis, about "observables." No matter what terms you use—"God," "alpha particle," "prosperity"—they will, *if* they make factual sense, be about data or what directly evidences protocols.

Mr. Rynin comes close to avoiding this crippling procedure by a nice distinction he makes between direct and indirect evidence (p. 337). A statement means only what directly evidences it. It means "the fact, however complex, which is *direct* evidence for it —that is, the existence of which immediately establishes the statement as true" (p. 339). Other facts, related to this one as evidence of its existence, are not a part of the "meaning" of the statement, though they are the evidence to be appealed to when the fact which *is* the statement's meaning is itself not directly observable. This looks like an excellent and necessary consideration, providing for the significance of such statements as those about the unobservable nucleus of the atom (or national prosperity), and allowing them to be about the *nucleus,* not about pointer-readings, etc., which serve as the observable evidence. In short, even in such cases, the

meaning of the expression in quotation marks is the fact directly evidencing it, this latter being represented by the expression without the quotation marks (paraphrasing Tarski). "Nucleus of the atom" means nucleus of the atom, and what we know about such entities will depend on something else that we *can* observe.

But Mr. Rynin takes the virtue out of his distinction between direct and indirect evidence by continuing to labor with the old, stultifying Humean notion that factual sense can be made only of the sensible (observable). (This is precisely the tendency of his author, Alexander Johnson, and of Schlick.) He says: "That which is unobservable can never be described or designated. . . . On the subject of hypotheses and laws, it may be well to notice again that both the terms of the implication must refer to observable facts" (p. 347). Here we can not take "refer to observable facts" as meaning simply "imply observable facts," which any factually significant expression about the unobservable must indeed do; the first proposition here quoted precludes this interpretation. Mr. Rynin is saying that any factually significant expression must *mean* something observable. Letting F be an *at-present-unobserved* fact, and g an observed one which evidences F, "we can justifiably infer F's from g's only when F's and g's are *observable* occurrences" (p. 340). Even the *correlation* between observables must itself be observable if sense is to be made of it, according to Mr. Rynin (bottom of p. 342). So the distinction between a direct and indirect criterion of meaning is not allowed to bear much fruit. One gets the impression that a more carefully worked out theory of constructs (lower and higher order, less or more abstract or hypothetical) would have made it theoretically possible to "describe or designate" facts which, relative to confirmed laws, are unobservable "in principle." (In Carnap's language, some predicates can be known to be unobservable "in principle," relative to various "P-laws," themselves established through the protocols which these laws, plus certain initial or "boundary" conditions, imply.) Mr. Rynin's excellent concern to prevent cognitive nonsense has resulted, unnecessarily, in too cavalier a treatment of the unobservable. All that was necessary to his end was the insistence that constructs referring to unobservables be so construed as to imply some (and exclude other) observable states of affairs. From these observables we infer, with probability, that the unobservable state of affairs directly evidencing the hypothesis—its "meaning"—exists. (An adequate analysis of what is and what is not "observable" is crucial to the theory of cognitive meaning, and is a moot point among the best theorists; these comments do not even scratch the surface of this

issue.) This would provide for significant discourse not only about unobservable physical objects (electrons, e.g.), but also about such entities as ideals or minds, which are "unobservable" in some straightforward though undefined sense, and whose presence or absence makes a perceptible difference. Similarly, even the term "God" might have cognitive significance—without having certain sentences in the Bible as its designatum (p. 342)—if its use satisfies the above conditions. The effort to use the term this way is orthodox and traditional, though countered by an opposite religious custom whose motto is *credo quia impossibile est*. It is the tense fusion of both usages in single religious utterances that makes their cognitive sense tantalizing and volatile.

In this general connection, of sense and observability, Mr. Rynin makes another point which shows his problem from another angle. He says: "We can never *indicate* the meaning of a false statement, but we can describe it. We can indicate or denote only what does exist" (p. 335). Let us join to this another statement: "*What* is meant by any statement is the same whether it be true or false" (p. 336). Then, remembering that the "meaning" of any statement has been identified with the fact or state of affairs which directly evidences it, we are ready for some commentary.

In C. W. Morris's more accurate manner of speaking, what Mr. Rynin intends to say is that only true statements have denotata, and only denotata (though not all denotata) can be "indicated" or observed. (To say that only denotata can be "denoted" would be redundant and tautologous.) In short, *true* propositions not only "designate" or "describe"; they also denote. This is a part of what we mean when we say they are "true." False propositions designate or describe like the true, but they have no denotata (observed or unobserved).

Now, if one simply identifies the "meaning" of a true statement with its denotatum, which by definition is that from which its truth "directly follows" (p. 341 *et passim*), and which alone can be indicated or observed, it would be logically impossible for a statement "whether true or false" to have the same meaning, since when it is false it has no denotatum whatsoever. The "meaning" that remains constant despite truth or falsity is necessarily of the designative or descriptive sort. Using terms dear to F. H. Bradley, we might call this the "what" meaning of the expression, and its denotatum the "that" meaning. Mr. Rynin probably intended something like this when he italicized "what" in the above-quoted assertion about constancy of meaning while truth-values change. But he does not sufficiently recognize the distinction. He continues to treat the meaning of a false state-

ment as a kind of phantom *denotatum*, which we can not get around to observing or "indicating"—until, if ever, the proposition becomes true. Of course, we can, while it is false, characterize or significantly talk about the denotata it would have *if* it were true. Mr. Rynin suggests this (p. 335). But the point is that the sense of such a characterization is itself non-denotative (descriptive, designative) and therefore unobservable in principle; it can not ever be "indicated." *Even when the proposition is true, and has observable denotata, the descriptive part of its meaning is something over and above the observable data that constitute its denotation.* Else "what" it means could not be the same whether it be true or false.

Conceptualists (Lewis, Werkmeister) and positivists (Carnap, Hempel) have underscored these "schemata" or the ordering rules with which concepts or constructs are to be identified or defined. They stress the important fact that "pure" data can not verify or confirm propositions. The data must be construed, or be subject to some howsoever elementary ordering principle (definition), if they are to function as *denotata* of statements, with the power to confirm them. In Lewis's and Henle's language, this is what converts a simple *quale* (pure datum) into a "property" which alone can be significantly predicated in an objective "judgment." However, an adequate analysis of conceptual or designative, descriptive sense, and its inter-subjective communication, is yet to be made, as Lewis intimates, and as is shown by Gentry's examination of Morris's theory of designation or signification.

In conclusion, may I suggest that a remark which Mr. Rynin makes about "exclamatory sentences" be extended to cover also the imperatives or, better, to expressions with respect to their "motivational" meaning. He writes: "Exclamatory sentences differ from others not in possessing any special form, but in possessing a certain kind of *expressive quality*" (p. 355). This is precisely the sort of point that should be made about imperatives as of most utterances, namely, that they possess a sort of, let us say, "moving quality," producing activity, physical or mental, by a kind of discharge-action. Of course, imperatives in human discourse do have a special grammatical form (so do the exclamatory, in a sense), and, as a rule, they have conspicuous cognitive content or statement meaning, as Mr. Rynin is well aware (pp. 353–355). My suggestion is that it is exclusively the non-propositional, motive impact of an expression (whether in the grammatical form of an imperative or not) that should be called its "motivational" sense or function, reserving the term "imperative" for *propositions* formulated as commands. ("Close the door" conveys the

proposition "The door is closed," the imperative sentence-form being simply the standardized sign that the speaker wants action that will make the proposition true. Understanding such an expression may be quite "intellectual," unaccompanied by action. But "understanding" the motivational sense is *identical* with a non-cognitive response to the expression.) Thus, "motivational function" is a genuine, distinct category in the philosophy of meaning, while "imperative" is only a grammatiform. The general diminution of the evocative impact of signs (including their motivational, emotive, and pictorial functions) on imagination and thought is what is currently lamented (Eliot, *et al.*) as the thinning out of cultural substance or ethos, the passing of tradition and myth—the conditions in which certain signs function as electrifying and corporate symbols, mitigating man's loneliness and moving him towards his goals without an explicit cognitive grasp of them or of the means to their attainment. But that there are fewer "imperatives," or commands or requests, would certainly be an unwarranted supposition. This fact suggests the need for a distinct category, "motivational function," fundamental to the philosophy of meaning, and marked off from the meaning of "imperatives" with their explicit propositional content, the "understanding" of which requires precisely the same clear grasp of *concepts* as in the case of propositions in statemental form.

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BOOK NOTES

Dreadful Freedom. A Critique of Existentialism. MARJORIE GRENE. Chicago: The University of Chicago Press. 1948. ix + 150 pp. $2.75.

To those who still prefer to take their dread in large, synthetic doses this book will be welcome. It presents an exposition and a wavering critique of existentialism, treating especially some philosophical reflections of Kierkegaard, Sartre, Heidegger, Jaspers, and Marcel. Relatively more space is given to critique than to exposition; and much of the critique is in the nature of rather sweeping judgments without adequate presentation of the supporting evidence and argument. Kierkegaard is stigmatized as "a small man in a small society in a small intellectual world" (p. 40). Heidegger, Jaspers, and Marcel are treated sketchily; Marcel's "Metaphysical Diaries" are judged to be "not genuine philosophiz-

ing but a two-faced, ambiguous, and not even very clever imitation of it" (p. 132), while in Jaspers we have "only a long series of vague and sentimental generalizations" (p. 137); both Jaspers and Marcel "lack, as existentialists, the terrible realization of dread as the core of human life" (p. 138). Sartre comes off best, although even he is found to be "too logical in the wrong places" (p. 113), but in the end is applauded for the brilliance of his dialectics and the soundness of his incidental observations. The point of the author's criticism is not that the existentialists have talked a great deal of passionate nonsense, but that some of them are perhaps not sufficiently existential. She considers existentialism to be "a courageous and honest attempt at a new morality" (p. 149).

The author makes a point of the difficulty of deriving from existentialist presuppositions any valid conception of community and of objective, communal values. In Chapter V entitled "French Existentialism and Politics: the New Revolutionary," which seemed to this reviewer the best in the book, she shows that in the case of Sartre there is no way of passing logically from absolute individual freedom to the social solidarity necessary in order to establish a new elite of perpetual revolutionaries. It might be added that Kierkegaard and Nietzsche were at least consistent in their radical individualism; but the French existentialists want to eat their cake and have it too; that is, they want to have absolute freedom *and* solidarity with their kind. But there is in their presuppositions about freedom and the individual no true point of attachment for community. Jaspers is least subject to this criticism, but he receives much less than justice at the author's hands.

One of the characteristics of every great philosophy is that it casts the episodes of any historic day into the perspective of time and a cosmic interpretation of good and evil. Existentialism lacks this quality of universality. French existentialism is chiefly the outgrowth of a tragic episode filled with horror and bestiality. But the sadistic eruptions of modern times do not represent the whole of human experience. It took the colossal egotism of Kierkegaard to build a philosophy of man on the foundation of his own frustrated romance. Similarly, the *maquis,* assuming with characteristic French national egotism that the fate of France is the fate of mankind, took their ordeal of war and occupation to be representative of all human experience. War and bloodshed swirled about Spinoza too; the world has not waited upon modern times to discover what it means to be hungry, alone, tortured, and filled with dread and fear. But it remained for modern existentialists

to argue that these experiences alone reveal the true nature of things. The author of this book notes that Sartre himself admits that a revolutionary philosophy must be both immediately practical and universally true, otherwise it is just another myth. Sartre is thus convicted by his own criterion. Existentialism represents, in Miss Grene's words, "a new expression of an old despair," rather than a new philosophy.

O. F. K.

Der Ursprung der griechischen Philosophie von Hesiod bis Parmenides. OLOF GIGON. Basel: Benno Schwabe & Co. 1945. 291 pp. 17 fr.

Sokrates: sein Bild in Dichtung und Geschichte. OLOF GIGON. Bern: A. Francke. 1947. 319 pp.

In these two scholarly works, Professor Gigon of Freiburg University elaborates the thesis that the sources of Greek philosophy are in poetry. From Hesiod to Parmenides, philosophy was primarily concerned with the nature of the Homeric world, not as this was conveyed to the Greek mind through religious and political tradition, but as it had been originally depicted in the poetic imagery of the myth. The world of gods and men, with its contrasting elements of order and chaos, love and strife, was the context within which the philosophical problems and theories took shape, although the development of thought in Thales and his successors was directed towards ends that were quite different from those of the poets and belonged, instead, to the world of practical life and ordinary experience. Theological speculations gave way to mathematical and empirical inquiries or to ethical admonitions. The implicit distinction between the "whole," as conceived by Hesiod, and the manifold world of experience, as variously interpreted by the Ionian philosophers, became explicit and definitive in the dialectic of Parmenides as "being" and "not-being," "truth" and "opinion," the "one" and the "many." The "philosophical poetry" (or fiction), out of which the figure of Socrates emerged, was derived in large part from the dialectic in the poem of Parmenides. Historical fact and literary fiction are inseparable in the writings of the Socratics, including Plato, who were less concerned with the historical Socrates of a past generation than they were with the power and importance of the Philosopher, as typified in the *Sokratesdichtung* of their own generation, in opposition to contemporary types of Sophists.

D. S. M.

Work and History. An Essay on the Structure of Civilization. PAUL SCHRECKER. Princeton, N. J.: Princeton University Press. 1948. xviii + 322 pp. $5.00.

According to the author the *Geisteswissenschaften* are at present in a stage of transition which resembles the change suffered by the natural sciences at the beginning of the modern era. Philosophy of history has as yet to outgrow the mythological phase during which it confines itself to cataloguing descriptively qualities or substances. In order to become a science, inquiry in this field must submit to the universal norm of science which consists "in the method of reducing reality to elements and their formal relations" (p. xv). This statement of program made, Professor Schrecker sets to work. The elements in the field of human civilization, he holds, are provided by "work." Work is defined as "expenditure of energy, designed to overcome the resistance the object offers to changes" (p. 17), the implication being that the object is "in some way perfectible through the expenditure of energy in the fulfillment of a norm" (p. 18). The variety of norms results in a variety of types of relations or relational systems, and these types, in turn, define "provinces of civilization." The author enumerates and analyzes six "provinces": the state, science, religion, art, economy, and language. All these systems of relations, though substantially different, share with each other certain formal structures, and this "isomorphism of the several provinces" (p. 20) is fundamental for the comparative formal analysis carried through in Professor Schrecker's book.

The strain imposed upon the analyses by the writer's logical premises is very great. In dealing with religion, e.g., he must try to show that religious activity can be legitimately described as "work"—a thankless task. Another example for the continuously felt logical constraint: In the chapter on the state it is asserted that political history is designed to report changes in the legal scheme "occurring at a certain level of generality." "Roughly expressed," the writer continues, "these changes are all integrations of acts of work by such persons as are by the prevailing legal system constituted, if only for this particular activity, agents of the state" (p. 22). Instead of opening itself to the multiplicity of phenomena the mind maps out the prison which it has built for itself.

The writer's "critical theory" confines itself to the "formal order of civilization," assigning the discovery of essences or substances arranged in that order "to metaphysics and the theology

of history'' (p. xviii). This exclusion is based on an artificial idea of the division of labor in philosophy. A relic, historically speaking, of Kant's dichotomy of matter and form, it prevents the author from asking the relevant questions and from coming to grips with his subject-matter. His book reflects the predicament of German philosophy in its pre-phenomenological phase. Belonging as it does in the vicinity of the positivistically inclined neo-Kantianism of Heinrich Rickert, Jonas Cohn, Ernst Cassirer, and Hans Kelsen, it shows the limitations as well as the fine qualities of this school of thought. The reader can hardly fail to admire the rigorous consistency and constructive *élan* displayed in the pages of this work.

H. K.

Theories of Learning. ERNEST R. HILGARD. New York: Appleton-Century-Crofts, Inc. 1948. vi + 409 pp.

This book contains an intensive analysis and comparison of the major psychological theories of learning. The theories are divided into associationalist and gestalt and are compared with regard to their stand on five basic issues: (1) environmentalism vs. naturalism, (2) nature of wholes and of parts, (3) reactionism vs. cognition, (4) mechanism vs. dynamic equilibrium, (5) historical vs. contemporary causation. The theories are analyzed and evaluated in respect to a set of questions such as: What are the limits of learning? What is the rôle of practice in learning? How important are reward, punishment, or other motives in learning? What is the place of understanding and insight? Does learning one thing help you to learn something else? What happens when we remember and when we forget?

The theories considered are those of Thorndike, Guthrie, Hull, Skinner, the functionalists (e.g., Carr and Robinson), the gestaltists (Köhler, Koffka, and Wertheimer), Lewin, Wheeler, and Tolman. Hilgard himself attempts to develop a "point of view" at the end of the work, one he describes "as a functionalism like that of Carr or Robinson or Woodworth, supplemented by additional borrowing from the cognitive theories of writers like Lashley, Muenzinger, Tolman, and the rest" (p. 350).

Of most interest to the philosopher are the reasons Hilgard gives for the unsatisfactory state of contemporary learning theory. These are of interest since they call for methodological clarification of basic scientific procedures. For example, Hilgard complains that "concepts are not yet in order for a satisfactory comprehen-

sive theory. . . . The search for the appropriate concepts is not merely an exercise in defining or classification. It requires a high order of theory construction based on open-minded acceptance of demonstrated relationships and in addition contributing to the ordering of such relationships into a system" (pp. 326–327). Another problem set for the philosopher of science is one growing out of "inappropriate quantification" where "quantification collapses when the underlying processes are not understood" (pp. 327–328). Here a complete analysis of the conditions under which quantification becomes "measurement" would be of considerable service to the psychologist.

By way of criticism, it must be said that Hilgard's historical references sometimes provide an inaccurate picture of a contributor's work. For example (and one example will do), he says of the "behaviorists" that they all have in common

> the conviction that a science of psychology must be based upon a study of that which is overtly observable: physical stimuli, the muscular movements and glandular secretions which they arouse, and the environmental products which ensue. The behaviorists differ somewhat among themselves as to what may be inferred in addition to what is measured, but they all exclude self-observation [introspection] as a legitimate scientific method. [P. 53.]

This is, of course, a common enough characterization, but certainly should not be propagated in a book that claims to give a detailed historical account of the background of learning theory. Actually, behaviorism arose as a demand that the procedure of verification of psychological statements be a controlled procedure, the various steps of which can be checked in a manner analogous to checks in any branch of science. All behaviorists agree on this much. They do *not* agree that the only pertinent data are physical stimuli, muscular movements, and the like. They do *not* all assert that introspective judgments are to be excluded from scientific method (but merely that an introspective judgment that can not be checked has no validity). It may be true that Watson took as strong a viewpoint as Hilgard asserts; it is certainly not true that Singer did so, though the juxtaposition of Singer's name with the above quotation is apt to leave the reader with such an erroneous impression.

The book is a valuable inventory of the field and will serve as a convenient reference for all those interested in this important area of psychological investigation.

C. W. C.

NEW BOOKS AND JOURNALS

Marcel, Gabriel: Being and Having. A translation of *Etre et Avoir* by Katharine Farrer. London: Dacre Press. 1949. 240 pp. 10/6.

Perry, Ralph Barton: Characteristically American. Five lectures delivered on the William W. Cook Foundation at the University of Michigan, November–December 1948. New York: Alfred A. Knopf. 1949. x + 162 + v pp. $3.00.

Sinha, Jadunath: Introduction to Indian Philosophy. Agra, India: Lakshmi Narain Agarwal. iv + 314 + v pp. 8 Rs; $3.00.

ETHICS. Volume LIX, Number 4. Variation on a Theme by Cooley: *R. G. Tugwell.* Prescriptions for Peace: Social-Science Chimera?: *Jessie Bernard.* Discussion—The Pursuit of Wisdom: Reflections on some Recent Pursuers: *W. A. Wick.* Virtue and Knowledge: The View of Professor Polanyi: *F. H. Knight.* The Mystery of 1789: *William Seagle.*

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ZEITSCHRIFT FÜR PHILOSOPHISCHE FORSCHUNG. Band III, Heft 3. Die Anfänge der Rechtsphilosophie und die Griechen: *Werner Jaeger.* Meister Eckeharts mystische Erkenntnislehre: *Othmar Spann.* Was bedeuten Lust und Unlust für die Grandlagen der Ethik: *Rudolf Schottlaender.* Die mehrwertiben Logiken und das Wahreitsproblem: *P. F. Linke.*

Algemeen Nederlands Tijdschrift voor Wijsbegeerte en Psychologie 41e jaargang, Aflevering 5. The Social Basis of Art Criticism: *H. Hungerland.* Het tijdsprobleem: *K. L. Piccardt.* Verslag van de esthetische sectie in het Xde Int. Phil. Congres: *J. Aler.* Afrekening met Kant: *R. F. Beerling.*